the presence of postural reflexes in such cases depends on their severity and extent, when dorsiflexion of the big toe does occur, it may be assumed to indicate an incomplete division of the cord, with retention of the older extrapyramidal at the expense of the more recent, and consequently more vulnerable, pyramidal influences.

R. M. S.

The development of the meninges.—S. C. Harvey and H. S. Burr, Arch. of Neurol. and Psychiat., 1926, xv, 545.

An experimental study of the origin of the meninges carried out on embryos of Amblystoma punctatum showed that the view of His and Kölliker that the pachymeninx and the leptomeninges have a common origin in a primitive mesenchyme derived from a specific germ layer, the mesoderm, is incorrect. Certain ectodermal elements derived in large part from the neural crest are contributed to the mesenchyme, and take part in the formation of the leptomeninges. Such origin suggests that the cells of the leptomeninges may have certain characteristics of their own, apparent in their reaction to injury and in the neoplasms arising from them.

R. M. S.

NEUROPATHOLOGY.

The significance of Hortega's work on neuroglia for the histopathology of the central nervous system (De beteekenis van Rio del Horteaga's neuroglia-onderzoek voor de histopathologie van het centrale Zenuwstelsel).—E. Winkler, Jr. Psychiat. en Neurol. Blad., 1926, March-June, 91.

This is a well illustrated article, in which the following conclusions are set down:

1. It is definitely established that the mesoglia cell is a true phagocyte.

2. The large group of oligodendroglia cells requires further differentiation. Some of them, regarded as satellite cells round the parenchymatous nerve cell and probably living in symbiosis with it, can under pathological circumstances take on the function of neuronophagia.

3. Alzheimer's view that the function of the macroglia has to do with metabolism in the central nervous system is upset by Hortega's researches. Weigert's opinion that it takes the place of destroyed neural tissue by fibre overgrowth is not shown to be wrong, but it is more correct to say that macroglia cell and fibre hypertrophy starts at the commencement of the general pathological process. Golgi's conception of the macroglia as having a nutritional function, and Held's lymphatic theory are alike unproven; the hypothesis of Nageotte and of Cajal is more probable, that the macroglia has a secretory function, which perhaps shows itself mainly under pathological conditions but is then subsequently checked, so that the granuloplasma undergoes a lipoid degeneration.

S. A. K. W.

**Part** at least of the interest of this paper resides in the fact that the author is clearly dissatisfied with the common ill-considered views still held in many quarters, that athetosis is the result solely of disease of the corpus striatum. He cites with appreciation the results of the researches of von Monakow, Mayendorf, Wilson and others, which show the impossibility of the usually received theories.

He has experimented on cats, extirpating the anterior and posterior sigmoid gyri, and has obtained, in three instances out of four, involuntary movements which he thinks resemble those of athetosis as seen in the human subject. In these experiments the corpus striatum was left entirely intact.

A long discussion of the whole question terminates in the conclusion that athetosis and chorea are movements which should not be assigned to specific local lesions of certain paths or structures, or attributed either to excitation or inhibition of centrifugal or centripetal regulation; rather they correspond to "a combination of disorders of functional equilibrium and dynamic, to which different factors contribute, those of central nervous origin as well as of endocrinological and humoral character."

The neurologist will at once be impressed with the excessive vagueness of this conclusion, as contrasted with the peculiarly definite character of athetosis, clinically considered, and will feel that the pendulum has swung with a vengeance to the opposite extreme. Nevertheless it is gratifying to note that some at least of continental observers have found the striatal theory to be untenable.

S. A. K. W.

[82] **Research on mucous degeneration in the brain** (Récherches sur la dégénérescence muqueuse dans le cerveau).—D’Hollander, Rubbens and Van Bogaert. *Jour. de neurol. et de psychiat.*, 1925, x, 647.

The authors, by various methods of staining, found plaques of mucous degeneration in the brains of three subjects aged over 60 years, exhibiting symptoms of mental confusion.

These plaques were present either in the white substance or in the deeper layers of the cortex of the brain substance. They were irregular in size and shape and were traversed in places by fibres; they were always in the region of a blood vessel. The size and number of the plaques varied in the three cases but had no relation to the clinical picture; moreover, they were not in any way limited to any special part of the brain.

The authors conclude by stating that the staining reactions suggest the material to be of the nature of a muco-lipoid, arising as the result of vascular degeneration or of toxins carried by the blood. They further state that they believe the degeneration, called "mucocytaire," is not a process limited to certain neuroglial cells.

E. A. C.

This is an interesting essay on the essential problem of disseminated sclerosis, in which the author discusses and dismisses all toxo-infective theories of the disease, and ranges himself with those (Müller, Strümpell, Marburg and others) who consider it arises on the basis of faulty development of the central nervous system, as revealed by decay of nerve-fibres and axis-cylinders, a substitutive neurogliosis taking the place of the dying parenchyma.

S. A. K. W.


A full description of the author’s researches, which show that besides the evidence of chronic hepatic lesions there existed in a subject who was neither alcoholic nor tubercular clear signs both in the small and large intestine of lesions of the mucous membrane. These consisted of haemorrhagic congestion, catarrh, specially of the small intestine, atrophy of the walls and lesions of the villi in the small bowel, and necrosis, cystic degeneration of glands and sub-mucous infiltration in the large bowel. The preaortic glands, which receive most of the lymph from the intestines, showed signs of recent and chronic adenitis.

These lesions indicate the passage of toxins (amino-groups), capable of producing the postencephalitic syndromes, into the circulation. These toxins may produce both hepatic and cerebral lesions.

R. G. G.


The pathological results of exposing nerve trunks to cold were observed. According to the degree of cold applied the lesions of necrosis, interstitial neuritis and parenchymatous neuritis developed, thus indicating that these conditions are phases of the same process, and may be combined as a mixed type of neuritis when the noxious influence is not sufficiently severe to cause a complete interstitial neuritis. On the other hand Wallerian degeneration should be kept clearly distinct from neuritis.

R. G. Gordon.